SYLLABUS PHYSICS PRACTICAL FOR CLASS XI (CBSE)

Total Periods : 60

The record to be submitted by the students, at the time of their annual examination, has to include:

- Record of at least 12 Experiments (with 6 from each section) to be performed by the students.
- Record of at least 6 Activities (with 3 each from section A and section B) to be performed by the students.
- Report of the project to be carried out by the students.

Evaluation Scheme

Time allowed : 3 Hrs.	Max. Marks : 30
Two experiments one from each section	7 + 7 Marks
Practical record (experiments & activities)	5 Marks
One activity from any section	3 Marks
Investigatory Project	3 Marks
Viva on experiments, activities and Project	5 Marks
Total	**30 Marks**

SECTION – A EXPERIMENTS

1. To measure diameter of a small spherical/cylindrical body and to measure internal diameter and depth of a given beaker/calorimeter using Vernier Callipers and hence find its volume.
2. To measure diameter of a given wire and thickness of a given sheet using screw gauge.
3. To determine volume of an irregular lamina using screw gauge.
4. To determine radius of curvature of a given spherical surface by a spherometer.
5. To determine the mass of two different objects using a beam balance.
6. To find the weight of a given body using parallelogram law of vectors.
7. Using a simple pendulum, plot its L–T^2 graph and use it to find the effective length of second's pendulum.
8. To study variation of time period of simple pendulum of a given length by taking bobs of same size but different masses and interpret the result.
9. To study the relationship between force of limiting friction and normal reaction and to find the coefficient of friction between a block and a horizontal surface.
10. To find the downward force, along an inclined plane, acting on a roller due to gravitational pull of the earth and study its relationship with the angle of inclination (θ) by plotting graph between force and $\sin\theta$.

ACTIVITIES *(For the purpose of demonstration only)*

1. To make a paper scale of given least count, e.g., 0.2 cm, 0.5 cm.
2. To determine mass of a given body using a metre scale by principle of moments.
3. To plot a graph for a given set of data, with proper choice of scales and error bars.
4. To measure the force of limiting friction for rolling of a roller on a horizontal plane.
5. To study the variation in range of a projectile with angle of projection.
6. To study the conservation of energy of a ball rolling down on an inclined plane (using a double inclined plane).
7. To study dissipation of energy of a simple pendulum by plotting a graph between square of amplitude and time.

SECTION – B EXPERIMENTS

1. To determine Young's modulus of elasticity of the material of a given wire.
2. To find the force constant of a helical spring by plotting a graph between load and extension.
3. To study the variation in volume with pressure for a sample of air at constant temperature by plotting gr between P and V, and between P and I/V.
4. To determine the surface tension of water by capillary rise method.
5. To determine the coefficient of viscosity of a given viscous liquid by measuring terminal velocity of a g spherical body.
6. To study the relationship between the temperature of a hot body and time by plotting a cooling curve.
7. To determine specific heat capacity of a given solid by method of mixtures.
8. To study the relation between frequency and length of a given wire under constant tension using sonom
9. To study the relation between the length of a given wire and tension for constant frequency using sonom
10. To find the speed of sound in air at room temperature using a resonance tube by two resonance positior

ACTIVITIES

(For the purpose of demonstration only)

1. To observe change of state and plot a cooling curve for molten wax.
2. To observe and explain the effect of heating on a bi-metallic strip.
3. To note the change in level of liquid in a container on heating and interpret the observations.
4. To study the effect of detergent on surface tension of water by observing capillary rise.
5. To study the factors affecting the rate of loss of heat of a liquid.
6. To study the effect of load on depression of a suitably clamped metre scale loaded at (i) its end (ii) in middle.
7. To observe the decrease in pressure with increase in velocity of a fluid.